



UNITED STATES PATENT AND TRADEMARK OFFICE

clm

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,270	06/23/2005	Yasushi Nakanishi	053673-0021	1428
20277 7590 12/12/2007 MCDERMOTT WILL & EMERY LLP 600 13TH STREET, N.W. WASHINGTON, DC 20005-3096			EXAMINER BURNEY, RACHEL L	
			ART UNIT 1795	PAPER NUMBER
			MAIL DATE 12/12/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/540,270	Applicant(s) NAKANISHI ET AL.	
	Examiner Rachel L. Burney	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6/23/2005, 1/24/2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statements (IDS) submitted on 06/23/2005 and 01/24/2006 were filed on or after the mailing date of the application on 06/23/2005. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 6 and A. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 4968575, Matsumura et al. in view of US Patent 6447973, Asami et al.

With respect to claims 1 and 2, Matsumura discloses a polyester comprising a disproportionated rosin (column 2, lines 49-57, Matsumura), a terephthalic acid (column 3, lines 1-2, Matsumura), a alcohol component comprising a glycol and an aliphatic diol having 3-10 carbons (column 3, lines 22-40, Matsumura), and a carboxylic acid having 3 or more carboxyl groups (column 3, lines 14-21, Matsumura). Matsumura discloses that a polyester with these components may be nonlinear (cross-linked) (column 1, lines 44-52, Matsumura). Matsumura gives an example having 0.2 mole of a rosin and a total of 0.9 mole of terephthalic/isophthalic acid, therefore having a (1)/(2) ratio (as defined in claim 1 of the instant application) of 0.22; and having 0.1 mole of glycol and 0.5 mole of the diol, , therefore having a (3)/(4) ratio (as defined in claim 1 of the instant application) of 0.2. Matsumura does not disclose a glycidyl ester of a tertiary fatty acid as part of the alcohol component. Asami discloses a polyester resin comprising rosin polymers having a softening point of 50-190oC, a glass transition point of 10-170oC, a rosin glycidyl ester, a dicarboxylic acid, and a crosslinking agent comprising tri- or more polybasic acids (column 1, lines 48-57, Asami). It would have been obvious to one of ordinary skill in the art at the time

of the invention to use the rosin glycidyl ester of Asami in the polyester of Matsumura because the resins are very similar and can both be used as toner resins.

With respect to claims 3 and 4, Matsumura and Asami disclose the resin of claims 1 and 2 as discussed above, but fail to teach the true density of the resin. The resin given by Matsumura and Asami is very similar to that of the instant specification and has similar characteristics. Matsumura shows that a resin usable in their invention has a glass transition point of 50oC and a softening point of 90-170oC (column 2, lines 1-14, Matsumura), the instant application gives a glass transition point of 45-70oC and a softening point of 115-150oC (PP 0035). Because other characteristics are similar it would be reasonable to conclude that the true densities of the resins would be similar.

With respect to claim 5, Matsumura and Asami disclose the resin of claim 1 as discussed above, wherein a toner is prepared with the polyester, a coloring agent, and a charge control agent (column 4, lines 33-43, Matsumura).

With respect to claim 6, Matsumura and Asami disclose the toner of claim 5 as discussed above, wherein the charge control agent is a from the Bontron S series for negatively charged particles (column 4, line 64 - column 5, line 2, Matsumura), Bontron S comprises metal salts of aromatic hydrocarboxylic acids.

With respect to claim 7, Matsumura and Asami disclose the toner of claim 5 as discussed above, which is used in an image forming method of heat-fixing the toner in a fixing device comprising a heating roller and a pressure-applying roller

(column 2, lines 35-41, Matsumura) wherein the minimum fixing temperatures range from 160-175 (Table 3, column 8, lines 35-48, Matsumura). Matsumura and Asami do not disclose the ratio of the width of the portion where the heating roller and the pressure roller contact each other to the fixing speed, but it would be obvious to one of ordinary skill in the art to find a fixing speed that is optimal for the size of the rollers.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 4968575, Matsumura et al. in view of US Patent 6447973, Asami et al. as applied to claim 5 above, and further in view of US PGPub 2002/0085851, Murata et al. Matsumura and Asami disclose the toner of claim 5 as discussed above, which is used in an image forming method of heat-fixing the toner in a fixing device comprising a heating roller and a pressure-applying roller (column 2, lines 35-41, Matsumura) wherein the minimum fixing temperatures range from 160-175 (Table 3, column 8, lines 35-48, Matsumura), but fails to teach the use of a fixing belt. Murata discloses an image forming method that uses an image forming apparatus which comprises a fixing belt which runs between a pressing roller and a heating roller (PP 0005), which leads to high uniformity and high temperature resumability (PP 0004). It would have been obvious to one of ordinary skill in the art to use the image forming apparatus of Murata for the toner of Matsumura and Asami to obtain high uniformity and temperature resumability. Matsumura, Asami, and Murata do not disclose the ratio of the width of the portion where the heating roller and the pressure roller contact each other to the

fixing speed, but it would be obvious to one of ordinary skill in the art to find a fixing speed that is optimal for the size of the rollers.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rachel L. Burney whose telephone number is 571-272-9802. The examiner can normally be reached on Mon-Thurs: 7:30-6:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on 571-272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


RLB


MARK F. HUFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700